

## ABSTRACT

Binary signals are converted at the transmission end into two optical signals which are combined into a polarization multiplex signal and are then transmitted. The transmitted polarization multiplex signal is divided at the receiving end into two polarized signal parts which are converted in a linear manner into orthogonal electrical components and are supplied to a multidimensional filter. Said multidimensional filter replaces a polarization controller, restores the signal values that correspond to the signals at the transmission end, and compensates signal distortions.